

ChiroThin™ Ingredients Quick Reference Guide



DOCTOR SUPERVISED
CHIROTIN
WEIGHT LOSS PROGRAM

Ever Heard Of The HPA?

One of the most important yet overlooked and misunderstood benefits and mechanisms of ChiroThin's™ effectiveness is the program's positive interactions and beneficial effects on the hypothalamic-pituitary-adrenal axis (HPA). If you have never heard of the HPA, or if you don't know how it impacts health, weight gain, and weight loss, here is some basic information. It is well accepted that chronic stress, when combined with abnormal energy balance, may contribute to an increased risk for obesity, especially upper body obesity, and other metabolic diseases. This association may be mediated by alterations in the hypothalamic-pituitary-adrenal (HPA) axis. In addition to causing systemic effects, changes in local cortisol metabolism in adipose (fatty) tissue may also influence the risk for obesity. HPA axis dysregulation may be the causal link between conditions such as maternal malnutrition, sleep deprivation with metabolic disease, and metabolic syndrome.

Below you will find a description of each individual ingredient in the ChiroThin™ formula and what its known effects are. Please keep in mind that there are multiple potencies of each ingredient in the formula. This is done because many ingredients yield different effects at different potencies. Additionally, each ingredient is included not only for its stand-alone effects but also for its unique interactions when combined with the other ingredients.

The effects of specific ingredients as well as the combined effects of the ChiroThin™ Nutritional Support Formula are as follows:

L-Arginine

L-arginine helps increase blood flow and nitric oxide levels. When combined with L-ornithine, it helps provide a mild detoxification effect for the body (predominantly liver). It plays a role in increased hormone production, which leads to increased anabolic effects on the body. The "hormone effect" causes interaction with the hypothalamic-pituitary-adrenal axis (HPA).*

L-Ornithine

L-ornithine supports the biosynthesis and utilization of L-arginine and L-proline. It plays a role in the urea cycle. When combined with L-arginine, it helps provide a mild detoxification effect for the body (predominately in the kidneys).* Like L-arginine, it also plays a role in increased hormone production, which leads to increased energy levels, performance, and anabolic effects on the body. The "hormone effect" causes interaction with the hypothalamic-pituitary-adrenal axis (HPA).

L-Carnitine

L-carnitine has been shown to aid in the stimulation and acceleration of metabolism, help stabilize and maintain energy levels, reduce fatigue, serve as an appetite suppressant, and help protect the muscles of the human body. It is able to accomplish this because it aids in the transportation and metabolism of long-chain fatty acids, such as triglycerides, into the mitochondria, where they are oxidized to produce energy. It helps keep the body from storing fat and increases aerobic capacity, thereby helping increase calorie burn. L-carnitine is also used to aid people with heart conditions. Studies have determined that taking L-carnitine after a heart attack decreases the chances of suffering another one later. People with type 2 diabetes can also benefit from L-carnitine due to its ability to increase glucose oxidation, glucose storage, and glucose uptake.*

L-Tyrosine

L-tyrosine helps increase the body's resiliency to stress by helping replenish catecholamine neurotransmitters like dopamine, norepinephrine (noradrenaline), and epinephrine (adrenaline). As a result, it interacts with the hypothalamic-pituitary-adrenal axis (HPA). It also helps prevent the negative aspects of environmental, psychosocial, and physical stress. An additional psychosocial effect is that it helps improve mood due to its anti-depressive effects. Other improvements have been shown in the following areas: improved sleep, fatigue prevention, reduction in blood pressure, increased cognitive performance, and increased endurance.*

L-Leucine

L-leucine makes up 8% of the body's protein and is the 4th most concentrated amino acid in skeletal muscle. Because of this, it helps preserve lean muscle, supplies the body with energy when under stress, helps preserve muscle glycogen, helps maintain nitrogen balance, and aids in healing of bone, skin, and muscle.*

L-Lysine

L-lysine is one of the building blocks for protein in the human body, but it is unable to be synthesized by the human body. As a result, it must be supplemented into the human body through diet and nutritional supplements. Even though there are over 300 amino acids, only 20 of them serve as the building blocks for protein. L-lysine aids in gastrointestinal absorption of calcium and how much calcium is excreted in the urine. When combined with L-arginine, it stimulates the cells responsible for building new bone tissue (osteoblastic activity). L-lysine also increases the production of collagen, which is a structural protein that is critical for maintaining the health of connective tissues, including cartilage, tendons, and skin. It also helps reduce stress and anxiety, which affects cortisol and DHEA levels, creating an interaction with the hypothalamic-pituitary-adrenal axis (HPA).*

L-Tryptophan

L-tryptophan is one of the 8 essential amino acids found in the human body, but it cannot be made by the human body; therefore, it must be supplemented through diet and nutritional supplements. L-tryptophan converts into serotonin, primarily in the brain. Serotonin is involved in controlling mood and appetite. (It suppresses hunger, cravings, and emotional eating... especially involving carbohydrates.) Additionally, L-tryptophan serves as a precursor for melatonin. It has been shown to help normalize sleep patterns. This results in interaction with hypothalamic-pituitary-adrenal axis (HPA).*

Vitamin B12

Vitamin B12 is directly related to energy production and regulation as well as decreased fatigue and lethargy due to its role in the conversion of carbohydrates into glucose. It also plays an important role in the healthy regulation of the nervous system and reduction in depression and stress. It helps maintain a healthy digestive system, aids in improving unhealthy cholesterol levels, and helps protect against high blood pressure. Because of this, it has an indirect interaction with the hypothalamic-pituitary-adrenal axis (HPA).*

Mag-Phos

Mag-Phos is found in the cells of muscles, nerves, bones, and spine. It serves the purpose of helping to protect both muscles and nerves. It is used to help reduce stress, pain, anxiety, depression, muscle spasms, headaches, irritability, and fatigue. Because of this, it has an indirect interaction with the hypothalamic-pituitary-adrenal axis (HPA).*

Nat-Phos

Nat-Phos helps supports proper digestion and, as a result, helps prevent nutritional deficiencies in people who suffer from food sensitivities and food allergies. Acting as a pH balancer, it helps restore enzyme balance in the digestive tract. It is well known as a remedy for conditions arising from excess lactic acid, often resulting from too much sugar intake. It is also accepted as a homeopathic remedy for inflammation, headaches, anxiety, and stress. Because of this, it has an indirect interaction with the hypothalamic-pituitary-adrenal axis (HPA).*